



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 21

[Docket No. FAA-2022-1726]

Airworthiness Criteria: Special Class Airworthiness Criteria for the AgustaWestland Philadelphia Corporation Model AW609 Powered-Lift

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed airworthiness criteria.

SUMMARY: The FAA announces the availability of, and requests comments on, the proposed airworthiness criteria for the AgustaWestland Philadelphia Corporation (AWPC) Model AW609 powered-lift. This document proposes airworthiness criteria the FAA finds to be appropriate and applicable for the powered-lift design.

DATES: The FAA must receive comments by [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

ADDRESSES: Send comments identified by Docket No. FAA-2022-1726 using any of the following methods:

- *Federal eRegulations Portal:* Go to <https://www.regulations.gov/> and follow the online instructions for sending your comments electronically.
- *Mail:* Send comments to Docket Operations, M-30, U.S. Department of Transportation (DOT), 1200 New Jersey Avenue, SE, Room W12-140, West Building Ground Floor, Washington, DC, 20590-0001.
- *Hand Delivery of Courier:* Take comments to Docket Operations in Room W12-140 of the West Building Ground Floor at 1200 New Jersey Avenue, SE, Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

- *Fax:* Fax comments to Docket Operations at 202-493-2251.

Privacy: The FAA will post all comments it receives, without change, to <https://www.regulations.gov>, including any personal information the commenter provides. Using the search function of the docket website, anyone can find and read the electronic form of all comments received into any FAA docket, including the name of the individual sending the comment (or signing the comment for an association, business, labor union, etc.). DOT's complete Privacy Act Statement can be found in the Federal Register published on April 11, 2000 (65 FR 19477-19478), as well as at <https://DocketsInfo.dot.gov>.

Docket: Background documents or comments received may be read at <https://www.regulations.gov/> at any time. Follow the online instructions for accessing the docket or go to Docket Operations in Room W12-140 of the West Building Ground Floor at 1200 New Jersey Avenue, SE, Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Clinton Jones, Strategic Policy Management Branch, AIR-613, Policy and Innovation Division, Aircraft Certification Service, Federal Aviation Administration, 2200 S 216th St, Des Moines, WA 98198; telephone and fax 206-231-3181; e mail Clinton.Jones@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites interested people to take part in the development of proposed airworthiness criteria for the AWPC Model AW609 powered-lift by sending written comments, data, or views. Please identify the AWPC Model AW609 and Docket No. FAA-2022-1726 on all submitted correspondence. The most helpful comments reference a specific portion of the airworthiness criteria, explain the reason for a recommended change, and include supporting data.

Except for Confidential Business Information as described in the following paragraph, and other information as described in title 14, Code of Federal Regulations (14 CFR) 11.35, the FAA will file in the docket all comments received, as well as a report summarizing each substantive public contact with FAA personnel concerning these proposed airworthiness criteria. Before acting on this proposal, the FAA will consider all comments received on or before the closing date for comments. The FAA will consider comments filed late if it is possible to do so without incurring delay. The FAA may change these airworthiness criteria based on received comments.

Confidential Business Information

Confidential Business Information (CBI) is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this notice contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this notice, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this notice. Submissions containing CBI should be sent to the individual listed under **FOR FURTHER INFORMATION CONTACT**. Any commentary that the FAA receives that is not specifically designated as CBI will be placed in the public docket for this notice.

Background

The AWPC Model AW609 is a two-engine powered-lift with a maximum weight of 17,500 lbs., and two crew and nine passenger seats. The aircraft has two “proprotors” instead of propellers or rotors. The AW609 design is a direct descendant of the Bell

Helicopter Model BA609 certification project, which had design origins from the experimental Bell XV-15 aircraft.

After several changes of applicants, on February 15, 2012, AgustaWestland Tilt-Rotor Company, now AWPC, applied for a type certificate for the Model AW609. Under 14 CFR 21.17(c), an application for type certification is effective for three years, unless the FAA approves a longer period. Section 21.17(d) provides that, where a type certificate has not been issued within the time limit established under section 21.17(c), the applicant may file for an extension and update the designated applicable regulations in the type certification basis. Since the project was not certificated within the established time limit, the FAA approved a series of requests for extension by AWPC. As a result, the date of the updated type certification basis is March 31, 2021.

Discussion

Powered-lift are type certificated as special class aircraft because the FAA has not yet established powered-lift airworthiness standards as a separate part of subchapter C of 14 CFR. Under the procedures in 14 CFR 21.17(b), the airworthiness requirements for special class aircraft are the portions of the requirements in parts 23, 25, 27, 29, 31, 33, and 35 found by the FAA to be appropriate and applicable to the specific type design and any other airworthiness criteria found by the FAA to provide an equivalent level of safety to the existing standards. This notice announces the applicable regulations and other airworthiness criteria developed for type certification of the Model AW609 powered-lift under § 21.17(b).

The powered-lift has characteristics of both a rotorcraft and an airplane. It is designed to function as a helicopter for takeoff and landing and as an airplane cruising at higher speeds than a helicopter during the enroute portion of flight operations.

Accordingly, the proposed Model AW609 certification basis contains standards from parts 23, 25, and 29, as well as other airworthiness criteria specific for a powered-lift.

This certification basis includes part 23, part 25, and part 29 airworthiness standards. These are part 23 at amendment 23-62, part 25 at amendment 25-135 (except § 25.903(a) at amendment 25-140), and part 29 at amendment 29-55. The proposed certification basis incorporates by reference existing transport category airplane and rotorcraft standards, one normal category airplane standard, Category A rotorcraft standards, optional Category B rotorcraft standards, and criteria for operation under instrument flight rules. This certification basis is not established for flight into known icing conditions.

The proposed certification basis also includes new criteria unique to the powered-lift design, designated as Tiltrotor (TR) criteria. Many of these TR criteria consist of modified part 25 or part 29 standards. Some include criteria that combine existing parts 23, 25, and 29 standards, as the maximum weight of the Model AW609 exceeds the weight for normal category rotorcraft and most part 23 category airplanes, but its passenger seating is less than that of a transport category airplane or a transport category rotorcraft. The FAA also developed TR criteria because no existing standard captures the powered-lift's transitional flight modes (during flight, the powered-lift nacelle rotates the proprotor system from providing vertical lift to horizontal propulsion). The TR criteria also contain definitions specific for the powered-lift, such as flight modes, configurations, speeds, and terminology ("flaperon" instead of "aileron" or "flap;" "proprotor" instead of "rotor" or "propeller").

For example, while existing part 25 and part 29 standards for passenger emergency exits include a size classification (types I, II, III, IV) depending on the passenger seating capacity and other factors, the proposed certification basis has a TR with criteria for the specific type of passenger emergency exit that is part of the design of the Model AW609. Another example involves fatigue evaluation. Part 25 contains requirements such as a limit of validity (LOV) on airframe fatigue for pressurized

fuselages, which are not in part 29. Instead, fatigue evaluation in part 29 includes a composite structures fatigue rule, due to the more extreme fatigue environment of rotorcraft. For small airplanes, part 23, amendment 23-48, added a composite airframe evaluation requirement for bonded joints, which is included in agency compliance guidance for parts 25 and 29 but not required by a specific regulation (the safety requirement is complied with through other broad existing regulations in those parts). Since the Model AW609 has a pressurized fuselage, the FAA developed TR criteria to include the LOV requirement. The proposed certification basis incorporates by reference the part 29 composite rotorcraft structures fatigue rule, TR criteria to include the composite bonding requirements from part 23, as well as TR criteria to include fatigue requirements for elastomeric primary structural elements.

Applicability

These airworthiness criteria, established under the provisions of § 21.17(b), are applicable to the AWPC Model AW609 powered-lift. Should AWPC wish to apply these airworthiness criteria to other powered-lift models, it must submit a new application for a type certificate.

Proposed Airworthiness Criteria

The FAA proposes airworthiness criteria for type certification of the AgustaWestland Philadelphia Corporation Model AW609 powered-lift. You may view the airworthiness criteria on the internet at <https://www.regulations.gov> in Docket No. FAA-2022-1726. You may also obtain a copy of the airworthiness criteria by contacting the individual listed in the **FOR FURTHER INFORMATION CONTACT** section of this notice.

Issued in Washington, D.C., on May 19, 2023.

Ian Lucas,
Manager, Certification Coordination Section,
Policy and Standards Division,
Aircraft Certification Service.

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